## AMENDMENTS TO THE CLAIMS

The following is a complete, marked-up listing of revised claims with a status identifier in parenthesis, underlined text indicating insertions, and strike through and/or double-bracketed text indicating deletions.

### LISTING OF CLAIMS

1. – 29. (Cancelled)

30. (New) A method of detecting a presence of slag in a shroud for guiding a molten metal from a ladle to a tundish, comprising:

providing a forked coil holder having at least two branches;

mounting at least one transmitting coil to a first branch and at least one receiving coil to a second branch of the forked coil holder;

placing the forked coil holder in such manner that an imagined straight line drawn between said at least one transmitting coil and said at least one receiving coil crosses the shroud;

generating, by said at least one transmitting coil, an electromagnetic field that enters the shroud and its contents;

generating an induced voltage by said at least one receiving coil which is subjected to the electromagnetic field having entered the shroud and its contents, wherein said induced voltage is indicative of the presence or absence of slag in said contents; and

mounting said forked coil holder to a shroud manipulator adapted to manipulate the shroud, and thereby keeping the coils unmovable relative to the shroud.

31. (New) The method as claimed in claim 30, further comprising:

providing said at least one transmitting coil in toroid form and arranging it so as to surround the shroud, and

providing said at least one receiving coil in toroid form and arranging it so as to surround the shroud.

32. (New) The method as claimed in claim 31, further comprising:

detecting turbulent flow, if any, inside the shroud; and

changing a frequency of the electromagnetic field generated by said at least one transmitting coil in case of turbulent flow having been detected.

33. (New) The method as claimed in claim 30, wherein generating, by said at least one transmitting coil, comprising:

an electromagnetic field of alternating frequencies, or

several electromagnetic fields with different frequencies.

34. (New) The method as claimed in claim 30, wherein when any induced voltage having a value outside a defined voltage range is indicative of the presence of slag, the method further comprising:

determining the flow of the molten metal passing through the shroud; and

defining said voltage range depending on a magnitude of the determined flow of molten metal.

35. (New) The method as claimed in claim 34, further comprising:

defining a larger voltage range if it is determined that the magnitude of the flow of molten metal has decreased.

36. (New) The method as claimed in claim 34, wherein the act of determining the flow of molten metal passing through the shroud comprises:

providing feedback from an opening position signal of a sliding gate at the ladle and calculating the flow of molten metal from the sliding gate opening information.

37. (New) The method as claimed in claim 34, wherein the act of determining the flow of molten metal passing through the shroud comprises:

measuring a rate of decrease in weight of the ladle content and calculating the flow of molten metal from said measured rate of decrease in weight.

38. (New) The method as claimed in claim 34, wherein the act of determining the flow of molten metal passing through the shroud comprises:

measuring the teeming rate in the tundish and calculating the flow of molten metal from said measure teeming rate.

39. (New) The method as claimed in claim 30, further comprising:

cooling said transmitting and receiving coils.

40. (New) A device for detecting a presence of slag in a shroud for guiding molten metal from a ladle to a tundish, comprising:

at least one transmitting coil for generating an electromagnetic field to be entered into the shroud and its contents;

at least one receiving coil for receiving the electromagnetic field that has entered the channel and its contents, and for generating an induced voltage, wherein said induced voltage is indicative of the presence or absence of slag in said contents;

a shroud manipulator adapted to manipulate the shroud; and

a forked coil holder having at least two branches, a first branch carrying said at least one transmitting coil and a second branch carrying said at least one receiving coil, the two branches being placeable in such manner that the shroud is located therebetween;

wherein the forked coil holder is mounted to the shroud manipulator such that said at least one transmitting coil and said at least one receiving coil are in a stationary position in relation to the shroud.

41. (New) The device as claimed in claim 40, wherein said coil are in the form of toroids, and the forked coil holder is adapted to hold each toroid in such manner that it surrounds the shroud.

42. (New) The device as claimed in claim 40, wherein said two branches are electrically isolated from each other.

43. (New) The device as claimed in claim 40, wherein when any induced voltage having a value outside a defined voltage range is indicative of the presence of slag, the device further comprising:

a device for determining the flow of the molten metal passing through the shroud; and

a device for defining said voltage range depending on a magnitude of the measured flow.

44. (New) The device as claimed in claim 43, wherein said device for determining the flow of the molten metal passing through the shroud comprises:

a sensor for sensing an opening position signal of a sliding gate at the ladle; and

a processor for calculating the flow molten metal from the sliding gate opening information.

45. (New) The device as claimed in claim 43, wherein said device for determining the flow of the molten metal passing through the shroud comprises:

a measuring device for measuring a rate of decrease in weight of the ladle content; and

a processor for calculating the flow of molten metal from said measured rate of decrease in weight.

46. (New) The device as claimed in claim 43, wherein said device for determining the flow of the molten metal passing through the shroud comprises:

a measuring device for measuring a teeming rate in the tundish, and

a processor for calculating the flow of molten metal from said measured teeming rate.

47. (New) The device as claimed in claim 40, wherein the transmitting and receiving coils are provided with directional elements for directing the electromagnetic field toward and away from the shroud.

48. (New) A casting plant, comprising:

a ladle adapted to contain molten metal;

a tundish adapted to receive molten metal from the ladle;

a shroud arranged between the ladle and the tundish, wherein molten metal is enabled to pass from the ladle, through the shroud, and to the tundish; and

a device as claimed in claim 40.

**<End of Claims Listing>**